

VI. NATURAL AND CULTURAL RESOURCE MANAGEMENT

NATURAL RESOURCE MANAGEMENT POLICY

The Division of Parks and Recreation' s approach to natural resource management is directed by the North Carolina Constitution and the State Parks Act, both of which require the prudent management of natural resources. The constitution sets the overall policy by broadly defining the conservation and protection of natural resources and the acquisition of such resources as a proper function of government. The State Parks Act states that unique archaeological, geological, biological, scenic and recreational resources are a part of the heritage of the people that “...*should be preserved and managed by those people for their use and for the use of their visitors and descendants.*”

The North Carolina state parks system plays an important role in maintaining, rehabilitating and perpetuating the state' s natural heritage. The natural resources of the state parks system include: high quality, rare or representative examples of natural communities; native plants and animals; geological features and land forms; water resources; and the natural processes that affect these resources. The primary objective in natural resource management will be the protection of natural resources for their inherent integrity and for appropriate types of enjoyment while ensuring their availability for future generations.

It is the Division' s policy that natural resources will be managed by allowing natural environments to evolve through natural processes with minimal human influence. Natural resource management will not attempt solely to preserve individual species or processes; rather, it will attempt to maintain all the components and processes of a park' s naturally evolving ecosystems. When intervention is necessary, direct or secondary effects on park resources will be minimized to the greatest extent possible. Intervention of natural processes may occur:

To correct or compensate for the previous human disruption of natural processes;

To protect, restore or enhance rare species and natural communities;

To protect, restore or enhance significant archaeological resources;

To construct, maintain, improve or protect park facilities; and,

To prevent danger to human health or safety around park facilities.

All park facilities will be designed, constructed and maintained to avoid adverse impacts to high quality natural communities, rare plant and animal species, major archaeological sites and other significant natural and cultural resources.

ENO RIVER NATURAL COMMUNITIES

Community descriptions follow the *Classification of the Natural Communities of North Carolina: Third Approximation* (Mike Schafale and Alan Weakley, 1990).

Dry Oak-Hickory Forest

This forest type, which typically occurs on ridge tops, steep south-facing slopes, and other dry upland areas, was once one of the most predominant natural communities in the Piedmont. Much of the historical range has been cleared for agriculture or urban development; those areas that were not cleared were subjected to long-term selective cutting and livestock foraging. Examples of significant size and quality are rare.

An extensive example of this community occurs on the broad ridge tops and upland slopes in the area around Few's Ford. The canopy is closed and is dominated by white oak (*Quercus alba*), southern red oak (*Q. falcata*), scarlet oak (*Q. coccinea*), and post oak (*Q. stellata*). The dominant hickory species are mockernut (*Carya tomentosa*) and pignut (*C. glabra*).

Dry-Mesic Oak-Hickory Forest

This forest type occurs on low and middle slopes, upland flats, and other dry-mesic upland areas. Like the Dry Oak-Hickory Forest, this was once one of the most extensive and well developed community types in the Piedmont prior to widespread clearing for development and agriculture.

Two examples of this community occur in the park. The first is on the middle and upper slopes of the extensively forested uplands south of the river around the Few's Ford area. The canopy is dominated by white oak, northern red oak (*Q. rubra*), black oak (*Q. velutina*), and scarlet oak. The dominant hickory species are mockernut and pignut. The second example occurs south of the river on the upland slopes and ridges in the Cabe Lands section of the park. Canopy species are the same as above, with the addition of yellow poplar (*Liriodendron tulipifera*), black walnut (*Juglans nigra*), shortleaf pine (*Pinus echinata*), and Virginia pine (*P. virginiana*).

Piedmont/Coastal Plain Acidic Cliff

This community type occurs on very steep to vertical slopes that are rocky or dry enough to prevent the formation of a closed tree or shrub canopy. Hard rock is the most typical substrate; however, this community is also associated with softer material that has been undercut and exposed by a stream. The vegetation is usually heterogeneous and scattered; trees and shrubs are limited to crevices or other areas of deeper soil.

Three examples of this community occur in the park. An unusually xeric example occurs on a steep, rocky, south-facing bluff north of the river in the Few's Ford area. The dominant tree and

shrub species are post oak, mountain laurel (*Kalmia latifolia*), and stunted Virginia red cedar (*Juniperus virginiana*). Herbaceous species include woolly lipfern (*Cheilanthes tomentosa*), and goat's rue (*Tephrosia virginiana*). A second example occurs on a rugged, nearly vertical outcrop that runs for approximately 1,000 feet along the east side of the river in the Cabe Lands section. Woody vegetation at this site is very limited and is dominated by dry site species such as Virginia pine, post oak, and blackjack oak (*Q. marilandica*). The best example of this community is the Garrard Slopes in Durham County, located on the south bank about one-half mile west of Guess Road. These cliffs rise approximately 70 feet and are about 700 feet long.

Mesic Mixed Hardwood Forest (Piedmont Subtype)

This community generally develops on low slopes, steep north-facing slopes, and ravines. These forests remain common across the region, and their occurrence on steep sites has spared many of them the extensive disturbance that has occurred in other upland natural communities.

Three examples of this natural community occur in the park. The first is in moist, north-facing ravines along the south side of the river in the Cabe Lands section. This is an old forest, with tree ages in some areas estimated to exceed 150 years. Dominant species include beech (*Fagus grandifolia*), bitternut hickory (*C. cordiformis*), northern red oak, and yellow poplar. The second example occurs on steep north-facing slopes and ravines south of the river in the Pump Station section. This is a younger community than the one at the Cabe Lands and it supports a diverse flora. Dominant canopy species include northern red oak, beech, and red maple (*Acer rubrum*). The average diameter-at-breast-height (dbh) is 10-12". Trees up to 30" dbh are also present. The herb layer is rich and diverse and includes yellow ladyslipper (*Cypripedium pubescens*), and doll's-eyes (*Actaea pachypoda*). The third example occurs in the Few's Ford section along north and east-facing slopes. Vegetation is similar to that found at the Cabe Lands.

Piedmont/Low Mountain Alluvial Forest

This community occurs in river and stream flood plains that are seasonally or intermittently flooded. Flood-borne sediments provide nutrients to these communities, which typically have a closed canopy. Structure and diversity of the subcanopy and herbaceous layers are highly variable and may be affected by the severity of flooding.

An example of this community occurs in the area around the Few's Ford Access. Dominant species include river birch (*Betula nigra*), sycamore (*Platanus occidentalis*), box-elder (*Acer negundo*), and white ash (*Fraxinus americana*).

Rocky Bar and Shore

This community occurs as outcrops and gravel bars in or adjacent to rivers and streams. These sites are typically too rocky or wet to support trees. Frequent disturbance results in vegetation patterns that are highly variable and dependent on flooding and sediment loads.

An example of this community type occurs in the area around the Few's Ford Access. The site features well developed gravel shoals and riffles in the riverbed; since these shoals are frequently reworked by the river, woody vegetation is essentially absent. The dominant plant species is common water-willow (*Justicia americana*). The site also supports mussel beds.

Piedmont/Coastal Plain Heath Bluff

This community occurs on steep, north-facing slopes and bluffs that generally border a flood plain forest or stream channel. Although usually found in areas underlain by hard rock, these communities may also develop on sites with softer material that has been undercut by a stream.

An extensive example of this community type occurs along a series of three steep, rocky bluffs along the south side of the river in the Cabe Lands section of the park. The vegetation at these bluffs is dominated by mountain laurel. Two of the bluffs support Catawba rhododendron (*Rhododendron catawbiense*). The tree canopy is open and is dominated by white oak, chestnut oak (*Q. montana*), beech, Virginia pine, and gum species (*Nyssa* spp.). The western bluff is the state's easternmost location for mountain spleenwort (*Asplenium montanum*).

RARE SPECIES AT ENO RIVER

Plants

Ginseng (*Panax quinquefolius*)

Ginseng is on the North Carolina watch list. This designation means that ginseng is believed to be rare and of conservation concern in the state, but it does not warrant active monitoring at this time. Populations have been previously documented in the vicinity of Cox Mountain at Few's Ford. Park staff, however, believe that the range of ginseng is diminishing since known populations of this plant are no longer extant in the park.

Amphibians

Neuse River Waterdog (*Necturus lewisi*)

This large salamander is a state-listed species of Special Concern. This listing means that the North Carolina Wildlife Resources Commission (WRC) has determined that this species is sufficiently rare to warrant monitoring. A 2000-2001 study indicates that the waterdog is not at imminent risk of disappearing from the Piedmont portion of the Neuse River basin, and that populations in the Eno River appear healthy. The low level of capture success, however, suggests at least an uncommon species. Evidence suggests that this animal is at some level of risk from impacted water quality. Continued monitoring is needed to ensure its future.

Mollusks

Eastern Lampmussel (*Lampsilis radiata*)

The eastern lampmussel is a state-listed species of Special Concern. This listing means that the WRC has determined that this species is sufficiently rare to warrant monitoring. During a survey in 1992, this mussel was found at a number of locations at Few's Ford, Pleasant Green, and the Pump Station.

Green Floater (*Lasmigona subviridis*)

The green floater is a state-listed endangered species, which means the Wildlife Resources Commission has determined that this mussel's continued existence as a viable component of the fauna in North Carolina is in jeopardy. The green floater is also a federal species of concern, which means that although it may be appropriate to list the species as endangered or threatened, the Fish and Wildlife Service does not currently have conclusive data on vulnerability or threats.

Yellow Lampmussel (*Lampsilis coriosa*) and **Atlantic Pigtoe** (*Fusconaia masoni*)

Both of these mussels are state-listed as Threatened by the WRC. This listing means that they are likely to become endangered species within the foreseeable future throughout all or a significant portion of their ranges. They are also federal-listed as Species of Concern, meaning that it may be appropriate to list these species as endangered or threatened, but currently the FWS does not have conclusive data on vulnerability or threats to warrant such a listing. Both species of mussels were sampled in 1995. The Atlantic pigtoe was found at a number of locations at the Pump Station, and the yellow lampmussel was found throughout the park.

Panhandle Pebblesnail (*Somatogyrus virginicus*)

The panhandle pebblesnail is a federal-listed Species of Concern and is designated by the Natural Heritage Program (NHP) as Significantly Rare. The federal listing means that it may be appropriate to list the species as endangered or threatened, but currently the FWS does not have conclusive data on vulnerability and threats to warrant such a listing. Although significantly rare species exist in small numbers, they have not been listed by the WRC as endangered, threatened, or special concern. The NHP monitors the status of significantly rare species. In 1993, this mussel was found at the Pump Station near Guess Road. While working on her thesis in the summer of 1997, a Duke University masters student found the pebble snail in over 30 locations in the park.

Squawfoot (*Strophitus undulatus*) and **Triangle Floater** (*Alasmidonta undulata*)

These rare mussels are state-listed as Threatened species and are, therefore, recognized by the WRC as ones that are likely to become endangered species within the foreseeable future throughout all or a significant portion of their range. Both of these species were sampled in 1992. A number of squawfoot mussels were found at the Pump Station. One triangle floater was found

at Few's Ford.

Notched Rainbow (*Villosa constricta*)

This mussel species is designated as Significantly Rare by the NHP. Significantly rare species exist in small numbers but have not been formally listed by the WRC as endangered, threatened, or special concern. The NHP monitors the status of Significantly Rare species. In 1995, the notched rainbow was found at a number of locations throughout the park.

Fish

Roanoke Bass (*Ambloplites cavifrons*)

The Roanoke bass is designated as Significantly Rare by the NHP. Significantly Rare species exist in small numbers but have not been formally listed by the WRC as endangered, threatened, or special concern. The NHP monitors the status of Significantly Rare species.

Carolina Darter (*Etheostoma collis*)

The Carolina darter is a state-listed species of Special Concern. This designation means that the WRC has determined that this fish is sufficiently rare to warrant monitoring.

Birds

Cooper's Hawk (*Accipiter cooperii*)

The Cooper's hawk is a state-listed species of Special Concern. This designation means that the Wildlife Resources Commission has determined that this bird is sufficiently rare to warrant monitoring.

Black Vulture (*Coragyps atratus*)

This species has been designated by the Wildlife Resources Commission as a Special Concern species. These birds prefer forested areas for nesting and forests or open areas for foraging.

Insects

Gray Petaltail (*Tachopteryx thoreyi*)

This dragonfly is designated as Significantly Rare by the NHP. Significantly Rare species exist in small numbers but have not been formally listed by the WRC as endangered, threatened, or special concern. The NHP monitors the status of Significantly Rare species.

DEDICATED NATURE PRESERVE

In January 1995, 1,150 acres of Eno River State Park, including the entire reach of the river that is included in the park's boundaries, were approved by the Governor and Council of State for designation as a Dedicated Nature Preserve. This designation supersedes any areas previously designated as Registered Natural Heritage Areas and provides more stringent rules for use and protection of the dedicated area.

The dedicated lands along the river include high quality examples of both rare and common natural community types. The rare community types are most notable for their small size and scarcity across the landscape; the larger, more common community types are most notable for the presence of mature, well developed vegetation patterns that resemble the historical landscape. These large tracts also provide habitat for animals that require large home ranges. The aquatic habitat is most notable for its role in supporting the park's numerous rare aquatic species, many of which serve as indicators of water quality.

Potential Additions to the Dedicated Nature Preserve

Additional lands that are acquired will need site inspections and inventories in order to determine their eligibility for inclusion in the Dedicated Nature Preserve.

NATURAL AND CULTURAL RESOURCE MANAGEMENT ISSUES

Natural Resource Inventories

Although the park has been the subject of a number of scientific research projects, including an aquatic survey in 1996, a comprehensive, updated natural heritage survey is needed. These inventories would provide important baseline data for monitoring and managing ecologically sensitive natural resources and would also help identify additional high quality areas for designation as Dedicated Nature Preserves. These data would also allow for expanded interpretation and education programs. Emphasis should be placed on developing and maintaining an updated database for the park's rare species. Efforts should also be made to determine the presence and status of rare species known only from isolated or historical records. Particular attention should be placed on the status of rare aquatic species, the presence of which frequently serve as indicators of water quality.

Cultural Resource Inventories

The area in and around the state park is known to have been long inhabited by the Eno, Occaneechee, and Shakori Indian tribes, who apparently shared the river valley with little animosity. These tribes dispersed soon after the arrival of European settlers around 1750, and little work has been done to document the location and extent of cultural resources associated with American Indian habitation and use of the river valley.

The same is generally true of the area's cultural resources associated with European settlement. Although much is known of the numerous grist mills that were built along the river in the eighteenth and nineteenth centuries, a comprehensive study of these sites has never occurred. The only site that has received any preliminary investigation is the Few's Ford community, which the North Carolina Department of Cultural Resources added to the study list of potential nominations to the National Register of Historic Places in April 1994.

In order to address issues regarding environmental compliance for capital improvements, the Resource Management Program has recommended that a system wide archaeological survey be conducted to determine what, if any, mitigation will be required for sites that support significant cultural resources. Funding has been approved by the Parks and Recreation Trust Fund, and surveys for all projects in the park's master plan are being coordinated with the Office of State Archaeology. In addition to these surveys, the division needs to develop a comprehensive database regarding the role and extent of both American Indian and European inhabitants in the Eno River Valley. Such studies could be of great benefit for the park's interpretation and education programs.

Water Quantity

Concerns over low flows in the Eno River prompted the Town of Hillsborough, the Orange-Alamance Water System, Inc., Orange County, and Piedmont Minerals, Inc. to develop a voluntary capacity use agreement in February 1989. This agreement restricts the amount of water each user can withdraw based on the actual flows measured in the river. Water users who withdraw more than 100,000 gallons per day are subject to the management controls stated in the agreement. The area covered by this agreement covers 150 square miles and encompasses the Eno River watershed upstream from the confluence of the Eno River with the Little River. As long as this agreement continues to function satisfactorily, it will continue to be administered on a voluntary basis.

Water Quality

The North Carolina Division of Water Quality regularly monitors the water chemistry and biology of the Eno River. Ambient water chemistry is sampled monthly at two sites and aquatic insects are sampled every five years at an additional two sites within the park. Considering the urban character of the areas surrounding the Eno River, the park lands provide an excellent buffer for the maintenance of high water quality in this river. Rapid growth, however, will continue to put pressure on the watershed, underscoring the need for long-term monitoring of water quality.

Southern Pine Beetle Management

Sections of the park have been affected by outbreaks of the southern pine beetle (*Dendroctonus frontalis*). Southern pine beetles (SPB) are a naturally occurring component of southeastern forests and are, therefore, always present at some level. However, their effects are rarely uniform and tend to be more adverse when combined with the physiological distress that trees experience when exposed to prolonged hot, dry weather, disease, or other stress causing agents.

Although the SPB is a significant and widespread native forest pest whose effects have been documented since the 1750s, an effective method to control its periodic outbreaks has not yet been developed. The division's policy on SPB outbreaks is to remove affected trees whenever they present a threat to visitor safety or to a neighboring landowner. In response to such outbreaks, control efforts at Eno River have focused primarily on the removal of affected trees to create buffers around active beetle sites. Small, isolated outbreaks that affect few trees or that are sufficiently removed from higher risk areas are generally left alone, since the impacts of getting to such sites generally outweigh the benefits gained from treating the spot. Pheromone treatments were employed in 1994 and 1995 by the U.S. Department of Agriculture as part of a scientific research project on SPB control. The results of these treatments have been mixed.

Durham Northwest and Northeast Loop (Eno Drive)

The division has reviewed and provided comments to the NC Department of Transportation on their Draft Environmental Impact Statement (DEIS) for the Durham Northwest and Northeast Loop. The division's major objection focuses on the proximity to the park of the segment from Roxboro Road westward to Interstate 85. The division believes that potential impacts, both short and long term, to the river and the park were not adequately addressed by the DEIS.

Potential noise impacts on the state park from the construction of this road were not addressed in the DEIS. The proposed road would be very close to the park or would adjoin the park boundary in several locations. Hiking, bird watching, environmental education, and other park activities would be adversely affected by noise generated by this project. The construction of a major road along the park boundary could also affect the wildlife living along the river corridor. Long term impacts could include wildlife killed by traffic, loss or alterations of habitat, and alterations in movement patterns. This type of development may also disrupt the breeding and foraging behavior of wary species.

Although the road would not cross the river, the location of the road so close to the river and the crossing of several major tributaries are likely to result in the degradation of the water quality of the river. The Eno River supports numerous rare aquatic species whose presence is largely a consequence of good water quality and relatively undisturbed habitat. It is reasonable to expect that the construction of this road will cause a significant amount of sedimentation, which could adversely affect the rare mussels and other aquatic species as well as degrade the aesthetic appeal of the river. Secondary impacts associated with this road project could include more urban development along the construction corridor.

As of December 2002, the Northwest Loop (Eno Drive west Roxboro Road) has been eliminated from the Metropolitan Planning Organization Long Range Transportation Plan. Should the Northwest Loop be re-inserted into transportation planning it will loom in the forefront of management concerns at Eno River State Park.

Invasive Exotic Plant Species

In 1999, Invasive Plant Control, Inc. was contracted by the Division of Parks and Recreation to conduct a park-by-park inventory of invasive exotic plant species. These inventories were

conducted with an emphasis on roads, trails, waterways, and high use visitor areas and were intended to serve as the primary source for information regarding species identification, location, degree of infestation, and difficulty of control. Information from these inventories is to be used in conjunction with the division's *Exotic Plant Guidelines*, which provide step-by-step protocols for the development of control plans. Copies of this inventory and guideline are on file with the park and the Resource Management Program.

The inventory at ENRI was divided into four sections: Few's Ford; Pleasant Green/Cabe Lands; Cole Mill/Pump Station; and OCMO. In all, 14 invasive exotic plant species were identified; twelve of these species occurred on ENRI sites, and nine occurred at OCMO. The following species were identified:

Species	ENRI	OCMO
Lespedeza (Lespedeza cuneata)	X	X
Japanese honeysuckle (Lonicera japonica)	X	X
Japanese grass (Microstegium viminium)	X	X
Periwinkle (Vinca minor)	X	
Multiflora Rose (Rosa multiflora)	X	X
Chinese privet (Ligustrum sinense)	X	X
Tree of Heaven (Ailanthus altissima)	X	X
Autumn olive (Elaeagnus umbellata)	X	
Chinese wisteria (Wisteria sinensis)	X	
Mimosa (Albizia julibrissin)	X	
English ivy (Hedera helix)	X	X
Kudzu (Pueraria lobata)	X	
Large periwinkle (Vinca major)		X
Princess tree (Paulownia tomentosa)		X

It is recommended that park staff continue to search for exotic species and to update the 1999 inventory, as it is likely that additional exotic species occur at both ENRI and OCMO that were not previously documented. It is also recommended that park staff apply the protocols contained in the division's *Exotic Species Guidelines* to identify and prioritize the most critical species for control and/or eradication. Of particular concern are well-established populations of aggressive species, including tree of heaven, multiflora rose, Japanese honeysuckle, and Chinese privet. All of these are common at old home sites, which are numerous throughout the park. The control of these species will likely be a long term project, as most of the non-native species that have been

found are aggressive and are well established. Control plans should, whenever possible, make the best possible use of volunteers and should include the use of appropriate herbicides that are applied according to the manufacturer's suggestions and under the supervision of a state-licensed applicator. Park staff can be licensed and can find information on this process by contacting the NC State Department of Agriculture.

Resource Management Plan

A comprehensive, park-specific resource management plan addressing these and future issues needs to be developed for Eno River State Park and Occoneechee Mountain. This plan should include detailed actions, the implementation of which will prevent or correct threats or damage to the natural resources of the park. The addition of a district resource management specialist would facilitate the development and implementation of this plan.

OCCONEECHEE MOUNTAIN NATURAL COMMUNITIES

The community descriptions follow the *Classification of the Natural Communities of North Carolina: Third Approximation* (Mike Schafale and Alan Weakley, 1990).

Dry Oak–Hickory Forest

Mature Dry Oak–Hickory Forests are found on the mid-slopes of Occoneechee Mountain. A typical assemblage of oaks, including white oak (*Quercus alba*), post oak (*Q. stellata*), and southern red oak (*Q. falcata*), along with a variety of hickory species (*Carya spp.*) forms the overstory. The understory is dominated by sourwood (*Oxydendrum arboreum*) and black gum (*Nyssa sylvatica*).

Piedmont Acidic Cliff

An example of this community occurs at the site known as Panther's Den, which is characterized by north-facing vertical cliffs and a steep, rocky ravine. Catawba rhododendron (*Rhododendron catawbiense*) and chestnut oak (*Q. montana*) dominate this site. The site is significant because it contains several montane disjuncts at their eastern limit, including sarsaparilla (*Aralia nudicaulis*) and mountain spleenwort (*Asplenium montanum*).

Piedmont Monadnock Forest

One of the largest and most mature examples of a Piedmont Monadnock Forest in the eastern piedmont occurs at the summit of Occoneechee Mountain. Dominated by chestnut oak and scarlet oak (*Q. coccinea*), this community occurs on rocky, well-drained, and generally very acidic soils. The understory contains an abundance of sourwood and red maple (*Acer rubrum*). Blueberries (*Vaccinium spp.*) and huckleberry (*Gaylussacia baccata*) dominate the sparse shrub layer.

Pine–Oak Heath

The Pine–Oak Heath at Occoneechee Mountain is the easternmost occurrence of this community in the state. It is located on the northern edge of the ridge and is dominated by Virginia pine (*Pinus virginiana*) and a dense shrub layer containing blueberries, huckleberry, and mountain laurel (*Kalmia latifolia*). Bracken fern (*Pteridium aquilinum*) is found in abundance.

OCCONEECHEE MOUNTAIN RARE SPECIES

Plants

PlantsBrown Elfin (*Incisalia augustinus*)

This butterfly has been placed on the Natural Heritage Program's (NHP) Watch List. Such species are believed to be of conservation value because of scarcity, declining populations, threats to populations, or their scarcity cannot be determined due to inadequate information. This species occurs in heath vegetation at the summit.

Large Witch-alder (*Fothergilla major*)

This species has been designated by the Plant Conservation Program (PCP) as a Candidate Species. Such species are considered to be quite rare. If present land use trends continue, the species may be listed as either Threatened or Endangered on the state level. At least two populations have been documented growing among heath-dominated communities on dry mid and upper slopes at Occoneechee Mountain.

Sweet Pinesap (*Monotropis odorata*)

This species has been designated by the PCP as a Candidate Species. Information on the species' presence at Occoneechee Mountain is very sketchy and needs to be confirmed.

Purple Fringeless Orchid (*Platanthera peramoena*)

This species has been designated by the PCP as a Candidate Species. Information on the species' presence at Occoneechee Mountain is very sketchy and needs to be confirmed. The most recent record dates from 1977.

Bradley's Spleenwort (*Asplenium bradleyi*)

This species has been listed by the NHP as a Candidate Species. NHP records indicate that Occoneechee Mountain supports what may be the state's largest population of this species. It occurs on the lower part of the mountain's north-facing slopes on rocks in a chestnut oak forest.

Insects

Gray Petaltail (*Tachopteryx thoreyi*)

This dragonfly is designated as Significantly Rare by the NHP. Significantly Rare species exist in small numbers but have not been formally listed by the WRC as endangered, threatened, or special concern. The NHP monitors the status of Significantly Rare species.

POTENTIAL DEDICATED NATURE PRESERVE

The inclusion of Occoneechee Mountain in the state parks system as a State Natural Area is based on Natural Heritage Program inventory data. Much of the mountain is included in the significant Natural Heritage Area identified for the site. Additional inventory work is needed to determine the boundaries of a Dedicated Nature Preserve under the Nature Preserves Act for Occoneechee Mountain State Natural Area.

OCCONEECHEE MOUNTAIN NATURAL AND CULTURAL RESOURCE MANAGEMENT ISSUES

Cultural Resources

Occoneechee Mountain has a diverse array of cultural resources. The ruins of an old mill village can be found on the northern slope of the mountain. The western slope has been scarred by an old quarry site. There is also evidence of American Indian habitation in the area. The development of trails and facilities must occur with these cultural resources in mind.

In order to address issues regarding environmental compliance for capital improvements, the Resource Management Program has recommended that a system wide archaeological survey be conducted to determine what, if any, mitigation will be required for sites that support significant cultural resources. Funding has been approved by the Parks and Recreation Trust Fund, and surveys for all projects in the park's master plan are being coordinated with the Office of State Archaeology. In addition to these surveys, the division needs to develop a comprehensive database regarding the role and extent of both American Indian and European inhabitants at Occoneechee Mountain. Such studies could be of great benefit to the park's interpretation and education (I&E) programs.

Natural Resources Inventories

Comprehensive natural heritage surveys are needed. These inventories would provide baseline data for monitoring and managing ecologically sensitive resources and would also help identify additional high quality areas for designation as Registered Natural Heritage Areas. These data would also allow for expanded interpretation and education programs. Emphasis should be placed on developing and maintaining an updated database for the park's rare species. Efforts

should also be made to determine the presence and status of rare species known only from isolated or historical records. Vegetation monitoring plots should be established in the park's various natural communities in order to track changes in community structure and status.

Invasive Exotic Plant Species

See page VI - 9 for summary of this issue.

Carrying Capacity of the Site

The area has had uncontrolled public use, and the natural resources are showing signs of wear. This site supports ecologically sensitive natural resources of statewide significance; some locations can only handle low levels of use. Research is needed to determine the level of use that the resources of the area can withstand.

Development of Trails and Facilities

Since much of the mountain supports rare plant and animal species and high quality natural communities, the development of trails and facilities will require coordination with the Resource Management Program. All capital improvements must be planned and constructed with resource protection in mind.

VII. PHYSICAL PLANT INVENTORY

FACILITY INVENTORY AND INSPECTION PROGRAM

Buildings and other structures in state parks are necessary to provide services to park visitors. These structures are essential for protecting public safety, health, and welfare while providing opportunities for outdoor recreation. They include infrastructure, such as roads, parking lots, trails, and systems for potable water, electrical distribution, and sewage treatment. They also include operational and recreational facilities, such as campgrounds, picnic areas, concession building, boardwalks, park offices, residences, pumphouses, warehouses, barracks, maintenance shops, visitor centers, etc. These facilities must be properly maintained to continually provide visitors a safe and high quality experience.

The Facility Inventory and Inspection Program (FIIP) is a computer-based system used to track the condition, maintenance needs, and repair costs of every building in the state parks system. A principal objective of FIIP is to identify deficiencies that may create a risk to health, or have the potential for fire or risk of injury or death. Other objectives are to identify accessibility deficiencies and other significant maintenance-related deficiencies.

During a field evaluation of each facility, deficiencies are given priority ratings of critical, serious, or minor. The deficiencies are classified in nine basic categories: site (the grounds and walkways surrounding the building); exterior envelope; interior envelope; fire/life safety; handicapped accessibility; public health; heating/ventilation/air conditioning (HVAC); plumbing; and electrical.

The field evaluation begins with an inventory of all structures in the park. The results of the inventory are presented using the building name and state property numbers as identification (Table VII-1 and Figure VII-1). Next, the types of repairs and repair costs are listed for each building. Finally, the cost summary for the park is given using the nine basic categories of repairs (e.g. exterior envelope) and the three levels of deficiencies (critical, serious, and minor).

Table VII-1. Eno River State Park Building Inventory

<u>NAME</u>	<u>CODE</u>	<u>BUILDING</u>
	<u>IN USE</u>	
025001	Piper-Cox House	Y
025002	Tool Shed	N
025003	Tractor Shed	Y
025004	Lawn Mower Shed	Y
025005	Wilderness Shelter Log Cabin	Y
025006	Shop	Y
025007	Pit Toilet	Y
025008	Park Office	Y
025009	Superintendent's Residence	Y
025010	Pumphouse	Y
025011	YACC Shack	Y
025012	Pit Toilet	Y
025013	Pit Toilet	Y
025017	Well Shelter	Y
025018	Ranger Residence	Y
025019	Vehicle Repair Shed	Y
025020	Ranger Residence	N
025021	Shed at Open Air Rd Residence	N
025022	Storage Building, Open Air Road	Y
025023	Wellhouse, Open Air Road	Y
025024	Picnic Shelter, Cole Mill Road	Y
025025	Vault Toilet near Shelter	Y
025026	Vault Toilet near Trail Head	Y
025027	Picnic Shelter A	Y
025028	Picnic Shelter B	Y
025029	Picnic Shelter C	Y
025031	Pit Privy B	Y
025033	Pit Privy D	Y
025034	Wellhouse, Open Air Camp	Y
025035	Open Air Camp Residence	Y
025036	Storage Shelter	Y
025037	Well Shelter	Y
025038	Vehicle Storage Shed	Y
025039	Fuel Shelter	N
025040	Occoneechee Mtn. Residence	Y
025041	Picnic Shelter at Cole Mill Access	Y
025042	Picnic Shelter at Few's Access	Y
025043	Toilet Building at Few's Access	Y
025044	Cabelands Ranger Residence	Y
025045	Cabelands Superintendent Residence	Y
025046	Cabelands Garage	Y
025047	Cabelands Seasonal Employee Residence	Y

ENO RIVER STATE PARK STATUS OF FACILITIES

Buildings at Eno River are in good condition. Many buildings require no work at all, and only the Piper-Cox House requires work totaling over \$10,000. Renovation of the Piper-Cox house (001) is not addressed in this report since an architecture firm has been contracted to design and oversee this work which is nearing completion. Buildings requiring no repairs are not listed below. Repair needs listed include work needed to meet accessibility standards.

BLDG #	BUILDING NAME / WORK NEEDED	DEMOLITION COST	REPAIR COST
025-002	Tool Shed		337
	Historical evaluation		337
025-005	Wilderness Shelter Log Cabin		\$5,061
	Replace deck and porch		4,050
	Replace log poles		1,011
025-006	Shop		1,275
	Remove underground tank, remediate soil, backfill		1,215
	Replace damaged acoustical tile		60
025-007	Pit Toilet		75
	Replace shingles		75
025-008	Park Office		3,294
	Rework parking to meet accessibility standards		825
	Install wood wedges at doors for accessibility		84
	Remove and replace concrete path for accessibility		675
	Remount paper towel dispensers, lower mirrors,		915
	Replace urinal		
	Install accessible water fountain		795
025-010	Pumphouse		601
	Replace door		293
	Insulate water pipes		308
025-011	YACC Shack	1,350	
	Demolish		
025-018	Ranger Residence		75
	Electrical outlet repair/install GFCI		75
025-023	Wellhouse, Open Air Road		105

BLDG #	BUILDING NAME / WORK NEEDED	DEMOLITION COST	REPAIR COST
	Add heat to building		105
025-024	Picnic Shelter, Cole Mill Road		248
	Replace H/A sign and post and mark access aisle		120
	Add handrail to path near shelter		128
025-025	Vault Toilet near Shelter		255
	Lower urinal, add grab bars		255
025-028	Picnic Shelter B		570
	Replace damaged doors		570
025-029	Picnic Shelter C		690
	Paint Deck		600
	Regrade on North side of building		90
025-031	Pit Privy B		128
	Repaint siding		128
025-034	Wellhouse, Open Air Camp		1,051
	Add radiant wall heat or heat lamp		105
	Repair copper piping		488
	Replace damaged roof decking		128
	Replace damaged rafters		135
	Replace roofing		195
025-035	Open Air Camp Residence		3,932
	Remove above ground tank		750
	Remove tree by house		188
	Replace crawl space door		75
	Replace kitchen, bath outlets with GFCI		180
	Add gutters, down spouts and splash blocks		938
	Replace acoustical tile		38
	Install fiberglass batt insulation under floor		1,508
	Add gravel to driveway		255
025-040	Occoneechee Mountain Residence		32,790

BLDG #	BUILDING NAME / WORK NEEDED	DEMOLITION COST	REPAIR COST
	Replace all windows with insulated windows		6,675
	Rewire entire house to current standards		6,000
	Replace panel box		1,800
	Replace dishwasher and wire		750
	Replace range		1,020
	Add siding to porch addition and paint		780
	Remove shingles, replace deteriorated decking and re-shingle		405
	Scrape and repaint roof soffit		720
	Repair heating/cooling unit wiring		120
	Replace/repair broken screens		420
	Install range hood in kitchen		525
	Remove bricks, re-grade walkway, replace brick		675
	Remove and replace carpet and asphalt tile		3,375
	Repair wallboard and repaint interior		705
	Clean and repaint ceilings		495
	Replace water and waste plumbing		3,450
	Replace toilet, lavatory and tub/shower		4,500
	Grade driveway and add gravel		375
	TOTAL	\$ 1,350	\$ 63,492

**FACILITY REPAIR NEEDS COST SUMMARY
FOR ENO RIVER STATE PARK**

DEFICIENCY CATEGORY	PRIORITY 1 (CRITICAL)	PRIORITY 2 (SERIOUS)	PRIORITY 3 (MINOR)	CATEGORY SUBTOTAL
Site	1,350	900	3,195	5,445
Exterior Envelope	0	19,945	1,903	21,848
Interior Envelope	0	6,083	98	6,181
Fire/Life Safety	0	0	0	0
Handicapped Access	0	3,797	0	3,797
Public Health	0	0	0	0
HVAC	0	5,685	0	5,685
Plumbing/Utility	1,965	8,438	308	10,711
Electrical	6,000	3,825	0	9,825
TOTALS:	9,315	48,673	5,504	63,492

Deficiencies that are a fire threat or threat to life, safety, or the health of an individual are considered to be "critical." A "serious" deficiency is one that is not considered a fire threat or threat to life or safety, but which could cause further damage to the structure if left uncorrected. This category usually includes building code violations. "Minor" deficiencies are those requiring general maintenance and repair.

Facility repair needs for Eno River and Occoneechee Mountain are current as of the last facility inspection, December of 1998.

ROAD INVENTORY AND INSPECTION

Background

The Institute for Transportation Research and Education (ITRE) study in March 1990 (subsequently revised by Alan Jeffreys in March of 1997) inventoried the following roads and parking lots: 1.1 miles of paved road, .54 miles of unpaved road, 3,002 square yards of paved parking lots and 1,368 square yards of unpaved parking lots.

Fews Ford Access Area (Main Park)

Description: Roads consist of the entrance road to the day-use picnic area, Piper-Cox access road, office road, maintenance and horse trailer roads. The roadway system has .82 miles of paved road, .48 miles of unpaved roads, 3,363 square yards of paved parking lot and 875 square yards of unpaved parking lots. The entrance and office road is 20 feet wide with 4-foot shoulders. Piper-Cox Road is 18 feet wide with 3-foot shoulders. The paved roads have an 8-inch stone base with 1-1/2 inches of I-2 asphalt.

Current Conditions: The main entrance road, office road and Piper-Cox Road were expanded and paved in 2000 and are in excellent shape. The Piper-Cox House parking areas were recently paved.

Repair Needs: The office parking lot and day-use picnic area parking lot need striping. The horse trailer road and maintenance road need light grading and additional stone.

Repair Cost: Approximately \$1,000; funds to come from annual NCDOT road funds.

Cole Mill Access Area

Description: The road consists of the entrance road at the end of Old Cole Mill Road (SR 1449) that serves the day-use picnic area. The roadway system has .28 miles of paved roads and 954 square yards of paved parking lots. The two parking lots have a total of 41 spaces, including three handicap spaces. The road is 17 feet wide with four-foot shoulders. The road has a stone base of unknown depth with two inches of I-2 asphalt. The new parking lot that serves the picnic shelter has an 8-inch stone base with 1-1/2 inches of I-2 asphalt.

Current Conditions: The entrance road was resurfaced in 2000 and is now in good condition. No repairs are needed.

Pleasant Green Access Area

Description: The road consists of a short entrance road off of Pleasant Green Road that serves as a main canoe takeout point down stream from Fews Ford Access. The roadway system has .06 miles of unpaved road and a 450 square yard gravel parking lot. The road is 16 feet wide with 2-foot shoulders. The road and parking lot has a stone base of unknown depth.

Current Conditions: This area is currently leased by Duke Power to the Division of Parks and

Recreation. The road and parking lot are in poor shape. Road maintenance funds will come from NCDOT, which currently maintains this area.

Repair Needs: The existing road and parking lot need to be widened and paved. Major grading and landscaping are needed.

Repair Cost: Until ownership of this area is given to the Division of Parks and Recreation, no large capital development should take place. The area is leased until 2010.

Cabe Lands Access Area

Description: A 15-car gravel parking lot provides river access between Fews Ford and Pleasant Green.

Current Condition: The lot is in good condition; no repairs are needed.

SEWER SYSTEM

Fews Ford Access Area

Description:

1. Office area sewer: 1,200 gallon septic tank with three 120-foot drainfield lines;
2. Superintendent's residence: 1,000 gallon septic tank with three 116-foot drainfield lines;
3. Maintenance sewer system: 1,000 gallon septic tank with an unknown number of lines;
4. Primitive group camp privy;
5. Backpack camp privy.
6. Picnic area: 4,000 gallon septic tank with a 3,000 gallon pump tank and twenty 100 ft. lines.

Current Conditions:

1. Installed in 1982: good shape;
2. Installed in 1982: good shape;
3. Age unknown: fair shape;
4. Installed prior to 1978; fair/good shape;
5. Installed 1979; fair/good shape.
6. Installed in 2001; excellent condition. Maintenance is contracted.

Repair Needs:

1. Pump out septic tank;
2. Pump out septic tank;
3. Pump out septic tank and install riser;
4. Replace with Romtec or composting unit;
5. No access; leave as is.
6. None needed.

Repair Cost:

1. \$150;
2. \$150;
3. \$500;
4. \$25,000;
5. None.
6. None.

Cole Mill Access Area

Description: Picnic area vault toilets; 2 Romtec toilets with a 750-gallon capacity.

Current Conditions: Installed in 1996: excellent condition. No repair needs.

Guess Road Ranger Residence

Description: 500 gallon fiberglass pump tank with manhole, riser and cover.

Current Conditions: Installed in 1992 and tied into Durham sewer system; good condition. No repair needs.

Ranger Residence on Open Air Camp Road

Description: Gravity outfall into city sewer.

Current Conditions: Tied into the city sewer system in 1995; good condition. No repair needs.

Ranger Residence on Sterling Road

Description: Gravity outfall into city sewer.

Current Conditions: Good; no repair needs.

Old Girl Scout Camp on Open Air Camp Road

Description: Consists of 2 pit privies.

Current Conditions: All privies are in poor shape; age is unknown.

Repair Needs: Replace with two Romtec units.

Repair Cost: \$50,000

WATER SYSTEM

Fews Ford Access Area

Description: The park is supplied by two water wells with a PVC piping distribution system of various sized piping. Well #1 is 125 feet deep and is 6-5/8 inches in diameter. It produces 40 gallons per minute and was drilled in 1981. The water is high in iron and turbidity. A commercial water softener was installed in 1991. The PVC piping distribution system consists of approximately 2,160 linear feet of 2-1/2 inch PVC, 260 linear feet of 1-1/2 inch PVC and 420 linear feet of 1 inch PVC. The system is also chlorinated. Various sizes of valves are located on the system. The well pump is a submersible pump of unknown size. Well #1 was taken off line when well #2 at the maintenance area was put into service in 2001. Well #2 is 430 ft. deep and produces 32 gallons-per-minute. The water is of good quality and sufficient to supply the Fews Ford Access Area. Two 500 gallon storage tanks provide pressure for the system.

Current Conditions: Well #2 is in good condition and supplies the area. Well #1 serves as a back up. No repairs are needed

Cole Mill Access

Description: This area is served by a 2-inch PVC piping distribution system that ties on to the City of Durham waterline on Cole Mill Road. There are approximately 1,550 linear feet of 2-inch main line with approximately 50 linear feet of 1-inch PVC piping.

Current Conditions: The waterline was installed in 1991 and is in good condition.

Repair Needs: None.

Repair Cost: None.

Guess Road Residence

Description: The residence is tied into Durham City water with 200 linear feet of 1-inch PVC waterline. The house also has a back-up well to water the garden and lawn area. The well has a jet pump of unknown age. The well depth is unknown.

Current Conditions: The water tie in to the city was done in 1992. The distribution line is in good condition.

Repair Needs: When the existing pump and tank fails, the well needs to be abandoned.

Repair Cost: \$1,000.

Ranger Residence at Open Air Camp Road

Description: The residence is served by a well of unknown depth and capacity. The well has a submersible pump of unknown size. A chlorinator and water pressure tank is included with the system. A PVC piping distribution supplies the house. This line is approximately 200 feet away.

Current Conditions: The park acquired the house in 1994 and has problems with the water quality. Lead and bacteria have been found in the water. The system has been replaced with new piping and a chlorinator and is in fair shape.

Repair Needs: Tie on to the city water line.

Repair Cost: Tie on cost is unknown.

Old Girl Scout Camp at Open Air Camp Road

Description: This area consists of a well and related polyethylene piping distribution system. The well is 6-5/8 inches in diameter; depth is unknown. The well has a submersible pump and a pump storage tank with related controls. There are approximately 500 linear feet of distribution system.

Current Conditions: The age of the system is unknown, but the whole system needs replacing if the area is to be used.

Repair Needs: Abandon the existing system and tie in to the city water system.

Repair Cost: Unknown until a variance can be obtained from the city on the road frontage requirement.

Ranger Residence at Sterling Road

Description: The ranger residence is served by a well of unknown depth and capacity.

Current Conditions: Poor

Repair Needs: The residence should tie on to city water.

Repair Costs: Unknown at this time.

ELECTRICAL SYSTEM

Fews Ford Access Area (Main Park)

Description: This area is served by a primary underground power cable distribution system. The system has 1,840 linear feet of primary underground cable with 520 linear feet of secondary underground cable with 3 pad mounted transformers. The power is supplied by Piedmont Electric Company of Hillsborough, NC.

Current Conditions: The power distribution system was installed in 1982 and is owned by the power company. The system is in good shape.

Repair Needs: None.

Repair Cost: None.

Cole Mill Access Area

Description: There is no electric power at this site.

Guess Road Residence

Description: Overhead power line with meter.

Current Conditions: The power is supplied by Duke Power Company located in Durham.

Repair Needs: Install power underground and change service riser.

Repair Cost: Lump sum electrical upgrade: \$1,000.

Old Girl Scout Camp on Open Air Camp Road

Description: An existing underground secondary electric cable supplies power to the well house and old picnic shelter.

Current Conditions: Duke Power Company, located in Durham, currently serves this area with underground power. It is unknown when this system was installed. The system is in poor condition.

Repair Needs: Power service needs to be inspected by the power company before restoring power to the area.

Repair Cost: Unknown.

Ranger Residence at Open Air Camp Road

Ranger Residence at Sterling Road

Description: Service consists of an overhead power line with a service riser.

Current Conditions: Residence is supplied power overhead by Duke Power Company. The power should remain overhead since other homes in the area are supplied overhead. No repairs are needed.

TELEPHONE SYSTEM

Fews Ford Access Area (Main Park)

Description: The phone system has five phones within the office and one in the maintenance area. There is one pay phone located outside the office underneath the covered porch. There are four dedicated phone lines to the park office (two outside lines, one MRTI, and one fax line). All residences have their own individual lines.

Current Conditions: The phone service is supplied by Verizon. No repairs are needed.

MAJOR CAPITAL IMPROVEMENT PROJECT PRIORITIES

The Eno River State Park Master Plan describes the long-range land acquisition and development plans for the park. The proposed development is organized into capital improvement projects. These projects were evaluated and ranked, thus creating a priority list of capital improvement projects for Eno River. The projects were combined with projects evaluated and ranked for other state park units, resulting in a priority list of capital improvement projects for the whole state parks system.

Capital improvement project rankings are based upon objectives such as promoting public health, protecting natural resources, enhancing environmental education, increasing public accessibility, and improving the park's appearance.

Part of the general management plan process included reviewing and updating the Project Priority List, a list of capital improvement projects originally compiled several years earlier using the 1979 master plan. The general management plan evaluation team considered factors such as changes in environmental regulations, the condition of existing facilities, natural heritage values, changes in recreation demand, visitor safety considerations, legislative and lease requirements, new development adjacent to the park, operational needs, and current recreation demand. Completed projects were dropped from the list and new projects were added. Changes to project scopes for various projects were also deemed necessary. The revised Project Priority List follows, along with a description of the various capital improvement projects.

Eno River Project Priority List

Rank	Description	Project Score	Total Costs
1	New maintenance building and warehouse renovation	675	\$ 707,468
2	Horse trail system improvements	659	375,169
3	Pumpstation, Cabe, Pleasant Green Access Development	649	427,147
4	Upgrade of pit privies to vault toilets (4)	625	113,682
5	Exhibits for Piper-Cox House	607	335,182
6	Lawrence Road access (land dependent)	581	131,092
7	Open air camp improvements (land dependent)	569	574,468
8	Bobbit's Hole camping and groupcamp	529	240,171
9	Office additions	522	344,016
	Total	—	3,248,395

1. New Maintenance Building/Warehouse Renovation (\$707,468) – This project will provide the basic maintenance facilities to support park operations. An old residence will be renovated to serve as a warehouse and a standard maintenance building will be constructed. The project also includes construction of a flammable storage building, vehicle wash pad and storage building, paved parking and a 10-foot-high security fence.
2. Horse Trail System Improvements (Land Dependent) (\$375,169) – This project would develop approximately 12 miles of horse trail and includes access road paving, improving a creek crossing, improving two river crossings, trailer parking, one foot bridge on ridge trails and signage. A small amount of land acquisition is needed to connect the trails.
3. Pump Station, Cabe, Pleasant Green Access Development (\$427,147) – The 1991 development of a city park nearby has lessened the need for the state to provide restrooms and picnic sites at the pump station, and so these projects elements were deleted from this project. The city park's restrooms are located approximately 800 feet from the pump station parking lot. A two-seat vault toilet facility has been added to the original project scope. The project includes 200 linear feet of access road, bus and car parking, a gate, 7,500 linear feet of trail, and interpretive displays at the trailhead.

Park staff have continued to make improvements, thus lowering capital improvement needs at access areas along the river. Development needed at Cabe Lands and Pleasant Green accesses was combined with the pumpstation project rather than remain a separate project. At Cabe Land and Pleasant Green, a 1-seat Romtec toilet will be added at both locations to serve visitors and address public health needs. A canoe launch, gate, paved parking and signage will be constructed at Pleasant Green. The project name was changed to reflect project scope changes.

4. Upgrade of Pit Privies to Vault Toilets (\$133,681) – This project will upgrade four pit privies at walk-in campsites by installing Clevis Multrum type mulching toilets. The toilets will need to be brought in by helicopter. Two toilets will be located at the Open Air Camp and two at Few's Ford.
5. Exhibits for the Piper-Cox House (\$335,182) – This new project will provide for design and construction of interactive exhibits for the Piper-Cox House. A Romtec single seat toilet and funds for landscaping are included.
6. Lawrence Road Access (\$131,092) – The Lawrence Road Access will provide river access and a trailhead facility. The project includes construction of an access road, gravel parking for 20 cars, canoe launch, signs, a gate, and exhibits. The project is dependent upon additional land acquisition.
7. Open Air Camp Improvements (Land Dependent) (\$574,468) – Project scope includes development of a two-mile interpretive trail, canoe launch and parking, car and bus parking, open grassy area, 30-person classroom and improvements to the existing lodge. The area, once developed, should help meet environmental education and training needs.
8. Bobbits Hole Camping and Group Camp (\$240,171) – The project would construct an access road to the planned group camp in the Ridge Trail area, campsites, hiking trail access, signage and two mulching toilets, one of which would need to be flown in.
9. Office Additions (\$344,016) – Additional office space and parking are needed at the park office. This project expands the staff area and adds a toilet, constructs public toilets, adds a security system and increases car and bus parking.

Occoneechee Mountain Capital Improvements

One capital improvement project to provide for initial general development at Occoneechee Mountain is proposed. The project will include development of an access road, handicapped access to the visitor contact station and pier, road improvements to the maintenance area, contact station renovation, entrance gate, equipment storage shed, fishing pier at the pond, relocation of the vault toilet, parking lot, ranger residence, well house and chlorination equipment, water distribution lines, area light at the gate and underground electric service. A conceptual plan of the proposed initial development follows.

Occoneechee Mountain Project Priority List

Rank	Description	Project Score	Total Costs
1	General Development	672	\$ 1,144,658
	Total:	—	1,144,658

OCONEECHEE MOUNTAIN STATE PARK CONCEPTUAL PLAN

6/99

